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Westman Champlin & Kelly PA
Suite 1600-International Centre
900 Second Avenue South
Minneapolis, MN 55402

EXAMINER	
SHAPIRO, LEONID	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/618,613	Applicant(s) DONATH ET AL.	
	Examiner Leonid Shapiro	Art Unit 2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24 and 49-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24 and 49-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 July 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "including a liquid crystal display **film** on which the stored objects are displayed " as in claims 3, 54 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

The claims 3, 54 have newly introduced limitation: "including a liquid crystal display **film** on which the stored objects are displayed ", which was not described in the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-2, 5-6, 8, are rejected under 35 U.S.C. 102(e) as being anticipated by Zamojdo et al. (US Patent No. 6,272,431).

As to claim 1, in summary, Zamojdo et al. discloses display on a mobile body (See Fig. 1, items 11, 16, in description See Col. 2, Lines 31-35), "to allow a mental image of the overall position of a car relative to a desired route to be quickly acquired, it is hereupon proposed to display the map information, possibly including a previously entered route or destination, in a head-up display"

Specifically with respect to claim 1, Zamojdo et al. discloses a display on a mobile body (Figures 1-5):

a **conformal** display of stored objects (See definition of **conformal** display in Applicant's disclosure, page 29, Lines 10-16) in Figure 3, items 15-16, 621, which is the virtual image of connecting lines, arrows that are substantially aligned with the real ground landmarks with corresponding points on the map in a proper perspective which could be seen by the driver with an unobstructed field of view (See in description Col. 3, Lines 31-37 and Col. 2, Lines 31-48);

stored objects corresponding to object information contained in a data **storage** system in Fig. 3, items 621, 16, which is corresponded to "a previously entered desired route or destinations" (Col. 2, Lines 33-35) (emphasis added). Inherently, a previously entered objects need to be stored in a data storage system.

As to claim 2, Zamojdo et al. teaches to display stored objects at a perspective approximately equal to a perspective that would be perceived from an operator position by an operator who has visual contact with actual objects that correspond to the stored objects (See Fig. 3, items 15-16, Col. 2, Lines 4-7 and 32-45, Col. 3, Lines 3-8, Col. 4, Lines 3-18).

As to claim 5, Zamojdo et al. teaches a guidance indicator indicating a direction (See Fig. 3, item 621, Col. 3, Lines 31-37).

As to claims 6, 8, Zamojdo et al. teaches the stored objects are positioned within a field of view of the operator in the operator position, at a location which approximately overlies the corresponding actual objects in a forward-looking field of view (See Fig. 3, items 15-16, Col. 2, Lines 4-7 and 32-45, Col. 3, Lines 3-8, Col. 4, Lines 3-18).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 7, 13, 16-18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Zamojdo et al. in view of Groves et al. (US Patent No. 5,414,439).

As to claim 7, Zamojdo et al. does not show the stored objects are see trough.

Groves et al. teaches the stored objects are see trough (See Figs. 4-5, items 30, 32, See Col. 4, Lines 47-65).

It would have been obvious to one of ordinary skill in the art at the time of invention use see trough objects as shown by Groves et al. in Zamojdo et al. apparatus in order enhance night vision by infrared imaging in the line of sight of a vehicle operator (See Col.1, Lines 38-40 in the Groves et al. reference).

As to claim 13, Zamojdo et al. does not show at least one of traffic markings or virtual path boundaries.

Groves et al. teaches traffic markings (See Figs 4-5, Col. 3, Lines 47-64).

It would have been obvious to one of ordinary skill in the art at the time of invention use traffic markings as shown by Groves et al. in Zamojdo et al. apparatus in order enhance night vision by infrared imaging in the line of sight of a vehicle operator (See Col.1, Lines 38-40 in the Groves et al. reference).

As to claim 16, Zamojdo et al. does not show displayed sensed objects, displayed at a perspective approximately equal to a perspective that would be perceived from an operator position at a location of the mobile body by an operator who has visual contact with actual objects corresponding to the displayed sensed objects.

Groves et al. teaches displayed sensed objects, displayed at a perspective approximately equal to a perspective that would be perceived from an operator position at a location of the mobile body by an operator who has visual contact with actual objects corresponding to the displayed sensed objects (See Fig. 1,4-5 items 12,14, 22, 24,30,30',30", in description See Col. 2, Lines 45-58 and Col. 3, Lines 47-65).

It would have been obvious to one of ordinary skill in the art at the time of invention use sensor or camera as shown by Groves et al. in Zamojdo et al. apparatus in order enhance night vision by infrared imaging in the line of sight of a vehicle operator (See Col.1, Lines 38-40 in the Groves et al. reference).

As to claim 17, Groves et al. teaches the display on mobile body wherein displayed sensed objects are positioned within a field of view of view of operator in the operator position, which approximately overlies the actual objects in the field of view (See Fig. 1,4-5 items 12,14, 22, 24,30,30',30", in description See Col. 2, Lines 45-58 and Col. 3, Lines 47-65).

As to claim 18, Groves et al. teaches the display wherein the displayed object are displayed in a forward-looking view of the operator (See Fig. 1,4-5 items 12,1422,24,30,30', 30", in description See Col. 2, Lines 45-58 and Col. 3, Lines 47-65).

5. Claims 4, 22-24 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zamojdo et al. in view of Lemenson et al. (US Patent No. 6, 226, 389 B1).

As to claim 4, Zamojdo et al. does not show stored objects include enhanced text or signage located proximate to the mobile body.

Lemenson et al. teaches to display flashing lights, alpha-numeric messages (See Fig. 2, item 51, Col. 6, Lines 45-57).

It would have been obvious to one of ordinary skill in the art at the time of invention to include stored objects include enhanced text or signage located proximate

to the mobile body as shown by Lemenson et al. for flashing lights, alpha-numeric messages in Zamojdo et al. apparatus in order to assist the driver of a motor vehicle in preventing accidents (See Abstract in the Lemenson et al. reference).

As to claim 22, Zamojdo et al. does not show displayed objects outside the field of view of the driver.

Lemenson et al. teaches to avoid obstacles to the left and right of the vehicle (See Fig. 12, item 44, Col. 11, Lines 53-57).

It would have been obvious to one of ordinary skill in the art at the time of invention to avoid obstacles to the left and right of the vehicle as shown by Lemenson et al. to show displayed objects outside the field of view of the driver in Zamojdo et al. apparatus in order to assist the driver of a motor vehicle in preventing accidents (See Abstract in the Lemenson et al. reference).

As to claim 23, Zamojdo et al. does not show displayed objects is indicative of services or goods available in a vicinity of the mobile body.

Lemenson et al. teaches to display information about images of vehicles with a warning indication (See Fig. 12, item 44, Col. 2, Lines 60-68).

It would have been obvious to one of ordinary skill in the art at the time of invention to show images of vehicles with a warning indication as shown by Lemenson et al. in Zamojdo et al. apparatus to display objects is indicative of services or goods available in a vicinity of the mobile body.

As to claim 24, Zamojdo et al. does not show a warning display, warning of an object which the mobile body is approaching.

Lemenson et al. teaches a warning display, warning of an object which the mobile body is approaching (Fig. 2, items 51, 55, Col. 2, Lines 55-67 and Col. 6, Lines 45-58).

It would have been obvious to one of ordinary skill in the art at the time of invention to show a warning display, warning of an object which the mobile body is approaching as shown by Lemenson et al. in Zamojdo et al. apparatus in order to assist the driver of a motor vehicle in preventing accidents (See Abstract in the Lemenson et al. reference).

As to claim 49, Zamojdo et al. does not show a warning display, warning of a local speed limit which the mobile body is approaching.

Lemenson et al. teaches a warning display, warning of an object which the mobile body is approaching (Fig. 2, items 51, 55, Col. 2, Lines 55-67 and Col. 6, Lines 45-58).

It would have been obvious to one of ordinary skill in the art at the time of invention to show a warning display, warning of an object which the mobile body is approaching as shown by Lemenson et al. in Zamojdo et al. to apparatus to show a warning display, warning of a local speed limit which the mobile body is approaching in order to assist the driver of a motor vehicle in preventing accidents (See Abstract in the Lemenson et al. reference).

6. Claims 3, 9, 11, are rejected under 35 U.S.C. 103(a) as being unpatentable over Zamojdo et al. as applied to claim 6 above, and further in view of Sumiyoshi (US Patent No. 5, 734, 358).

As to claims 9 and 11, Zamojdo et al. does not show a virtual rearview mirror.

Sumiyoshi teaches movable display unit is positioned at a right side when viewing by the driver (See Fig. 1, items 100, 16, Col. 3, Lines 29-37).

It would have been obvious to one of ordinary skill in the art at the time of invention to show the displayed objects are displayed in a virtual rearview mirror as shown by Sumiyoshi for in Zamojdo et al. apparatus in order to improve visibility.

As to claim 3, Zamojdo et al. does not show a liquid crystal display film on which stored objects are displayed.

Sumiyoshi teaches a liquid crystal display film on which stored objects are displayed (See Fig. 2, items 14-15, Col. 3, Lines 3-8).

It would have been obvious to one of ordinary skill in the art at the time of invention to show the stored objects on a liquid crystal display film as shown by Sumiyoshi for in Zamojdo et al. apparatus in order to improve visibility.

7. Claims 10, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zamojdo et al. and Sumiyoshi as applied to claims 9 and 11 above, and further in view of Regan (US Patent No. 6, 218, 934 B1).

As to claim 10, Zamojdo et al. and Sumiyoshi do not show the displayed objects are displayed in a location simulating a perspective from an operator of the mobile body through a rearview mirror.

Regan teaches rearview mirror for displaying vehicle trip information (See Fig. 2, item 20, Col. 3, Lines 8-14).

It would have been obvious to one of ordinary skill in the art at the time of invention to show the displayed objects through a rearview mirror as shown by Regan for the trip information in Zamojdo et al. and Sumiyoshi apparatus to show the displayed objects are displayed in a location simulating a perspective from operator in order to improve visibility.

As to claim 12, Zamojdo et al. and Sumiyoshi do not show the displayed objects which are displayed in a location simulating a perspective from an operator of the mobile body through a side view mirror.

Regan teaches rearview mirror for displaying vehicle trip information (See Fig. 2, item 20, Col. 3, Lines 8-14).

It would have been obvious to one of ordinary skill in the art at the time of invention to show the displayed objects through a rear view mirror as shown by Regan for the trip information for side view mirror in Zamojdo et al. and Sumiyoshi apparatus to show the displayed objects are displayed in a location simulating a perspective from operator in order to improve visibility.

8. Claim 14-15 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zamojdo et al. and Groves et al. as applied to claims 13 and 18 above, and further in view of Lemenson et al.

As to claims 14-15, Zamojdo et al. and Groves et al. do not show the displayed objects comprise; at least on of traffic lights, traffic signals, traffic signs and landmarks.

Lemenson et al teaches actual image data can be displayed in the real time like flashing lights, safety related messages (See Fig. 2, items 51, 55, Col. 6, Lines 45-57).

It would have been obvious to one of ordinary skill in the art at the time of invention to display flashing lights, safety related messages as shown by Lemelson et al. in Groves et al. and Zamojdo et al. apparatus to show the displayed objects comprise; at least on of traffic lights, traffic signals, traffic signs and landmarks in order to assist the driver of a motor vehicle in preventing accidents or minimizing the effects of same (See Abstract of Lemenson et al. reference).

As to claims 19-21, Zamojdo et al. and Groves et al. do not show mobile body comprises a vehicle travels over a roadway and wherein the displayed sensed objects correspond to transitory objects, such as other vehicles or pedestrians, or animals proximate to the roadway, not fixed in place during normal operating circumstances of the roadway.

Lemelson et al. teaches mobile body comprises a vehicle (See Col. 2, Lines 21-22) travels over a roadway and wherein the displayed sensed objects correspond to transitory objects, such as other vehicles or pedestrians, or animals proximate to the

roadway, not fixed in place during normal operating circumstances of the roadway (See Fig.1-2, items 17, 82, in description See Col.2, Lines 19-67).

It would have been obvious to one of ordinary skill in the art at the time of invention to display sensed objects correspond to transitory objects as shown by Lemelson et al. in Groves et al. and Zamojdo et al. apparatus in order to assist the driver of a motor vehicle in preventing accidents or minimizing the effects of same (See Abstract of Lemenson et al. reference).

9. Claims 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zamojdo et al. in view of Endo et al. (US Patent No. 6,289,278 B1).

As to claim 50, Zamojdo et al. discloses a mobile assist device (Figures 1-5) comprising:

stored objects each defining a location of a corresponding real world object in Fig. 3, items 621, 16, which is corresponded to "a previously entered desired route or destinations" (Col. 2, Lines 33-35) (emphasis added). Inherently, a previously entered objects need to be stored in a data storage system.

a display configured to display virtual images representing the stored objects in a conformal manner in Figure 3, items 15-16, 621, whereby each of the virtual images substantially aligned the real world object corresponding to the stored object of the virtual image when viewed from perspective of a user (See in description Col. 3, Lines 31-37 and Col. 2, Lines 31-48).

Zamojdo et al. does not show each of the virtual images substantially overlay the real world object corresponding to the stored object of the virtual image when viewed from perspective of a user.

Endo et al. teaches each of the virtual images substantially overlay the real world object corresponding to the stored object of the virtual image when viewed from perspective of a user (See Figs. 17-19, 22, items 200-2001, 2010-2012, See Col. 1, Lines 45-88).

It would have been obvious to one of ordinary skill in the art at the time of invention to overlay the real world object as shown by Endo et al. in Zamojdo et al. apparatus in order to reduce the amount of information by using selected data stored in the map data-base (See Col.2, Lines 30-33 in the Endo et al. reference).

As to claim 51, Zamojdo et al. does not teach the stored objects define a location of lane boundaries of a road; and the virtual images presented on the display include a line that substantially overlays the lane boundary of the road corresponding to the stored objects when viewed from a perspective of the user.

Endo et al. teaches t the stored objects define a location of lane boundaries of a road (See Fig. 18, items 2011-2012, Col. 14, Lines 20-58); and the virtual images presented on the display include a line that substantially overlays the lane boundary of the road corresponding to the stored objects when viewed from a perspective of the user (See Fig. 18, items 2011-2012, Col. 14, Lines 20-58).

It would have been obvious to one of ordinary skill in the art at the time of invention to overlay the real world object as shown by Endo et al. in Zamojdo et al.

apparatus in order to reduce the amount of information by using selected data stored in the map data-base (See Col.2, Lines 30-33 in the Endo et al. reference).

As to claim 52, Zamojdo et al. does not teach the stored objects correspond to at least one of a center lane boundary, a left lane boundary, and a right lane boundary of the road.

Endo et al. teaches stored image correspond to at least one of a center lane boundary, a left lane boundary, and a right lane boundary of the road (See Fig. 22, Col. 15, Lines 46-48).

It would have been obvious to one of ordinary skill in the art at the time of invention to use stored image correspond to at least one of a center lane boundary, a left lane boundary, and a right lane boundary of the road as shown by Endo et al. in Zamojdo et al. apparatus in order to reduce the amount of information by using selected data stored in the map data-base (See Col.2, Lines 30-33 in the Ando et al. reference).

As to claim 53, Zamojdo et al. teaches screen on which the virtual images are displayed (See Figs. 1-5, item 16, Col. 3, Lines 3-15).

10. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zamojdo et al. and Endo et al. as applied to claim 50 above, and further in view of Sumiyoshi.

Zamojdo et al. and Endo et al. do not show a liquid crystal display film on which stored objects are displayed.

Sumiyoshi teaches a liquid crystal display film on which stored objects are displayed (See Fig. 2, items 14-15, Col. 3, Lines 3-8).

It would have been obvious to one of ordinary skill in the art at the time of invention to show the stored objects on a liquid crystal display film as shown by Sumiyoshi for in Zamojdo et al. and Endo et al. apparatus in order to improve visibility.

Response to Arguments

11. Applicant's arguments filed on 03-01-04 have been fully considered but they are not persuasive.

On page 10, 1st paragraph of Remarks in relation to claim 1, Applicant's repeated the definition of term "conformal" from specification. However, as was stated in previous rejection, Zamojdo et al. reference completely satisfied this definition (See rejection of claim 1).

On the same page, in 2nd and 3rd paragraphs, Applicant's stated that an example of such conformal display (in Figs 3D-3E) is only proper measure of claim 1 limitation. So, Applicant's argues limitations that are not in the claim. The Specification is not the measure of invention. Therefore, limitations contained therein can not be read into claims for the purpose of avoiding the prior art. In re Sporck, 55 CCPA 743, 386 F.2d 924, 155 USPQ 687 (1968).

Telephone inquire

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 703-305-5661. The examiner can normally be reached on 8 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703-305-4938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ls 05-10-04

VIJAY SHANKAR
PRIMARY EXAMINER